

Two New Genera and Two New Species of Acanthosomatidae (Hemiptera) from South America, with a Key to the Genera of the Western Hemisphere

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RECEIVED FOR PUBLICATION JUNE 8, 1974

Abstract: Two new acanthosomatid genera, each with one new species, are described: *Mazanoma*, new genus, *M. variada*, new species and type species, type locality Guardia Vieja, Los Andes, Aconcagua, Chile; and *Tolono*, new genus, *T. decoratus*, new species and type species, type locality Loja Province, Ecuador. A key to the acanthosomatid genera of the Western Hemisphere is given. *Sinopla bicallosus* Stål is transferred to *Acrophyma*.

Two new genera of acanthosomatids from South America, each with one new species, are described. A key to the acanthosomatid genera of the Western Hemisphere, the first since that of Stål (1867), relates the new genera to those previously known in this region.

Synonymy and generic diagnoses will appear in a revision of the world genera of acanthosomatids now being completed by R. Kumar. The format of the generic descriptions given here and the terminology conform to that used in the revision of world genera.

Tunaria Pirán, 1957, (not Link, 1807; not Steinmann and Hoek, 1912), represented by *T. andicola* Pirán, 1957, was not available for study, and the description does not permit placing this genus in the key. From the description and figure *Tunaria* Pirán cannot be distinguished from *Blaudus* Stål.

One generically misplaced species was noted during the preparation of the key:

Acrophyma bicallosa (Stål) New Combination

Sinopla bicallosus Stål, 1872, Sv. Vet. Ak. Handl. 10(4): 62.

KEY TO GENERA OF ACANTHOSOMATIDAE OF THE WESTERN HEMISPHERE

- | | |
|---|----------------------------|
| 1. Median tubercle or spine present at base of abdominal venter | 9 |
| 1' Base of abdominal venter smoothly convex | 2 |
| 2(1). Distal end of first antennal segment clearly surpassing apex of head | 3 |
| 2' Distal end of first antennal segment reaching little if any beyond apex of head | 6 |
| 3(2). Longitudinal sulcus on prosternum before coxae as deep as diameter of rostrum, little wider; distal diameter of first antennal segment usually about twice basal diameter | <i>Cylindrocneema</i> Mayr |
| 3' Longitudinal sulcus on prosternum absent or much broader than diameter of rostrum; first antennal segment subcylindrical | 4 |

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- 4(3). Length of first antennal segment more than .8 length of head measured dorsally *Planois* Signoret
 4' Length of first antennal segment less than .6 length of head measured dorsally 5
- 5(4). Prosternum shallowly depressed lengthwise *No ϕ alis* Signoret
 5' Prosternum transversely convex *Ditomotarsus* Spinola
- 6(2). Paraclypei far surpassing anteclypeus, usually contiguous before anteclypeus *Mazonoma* n. gen.
 6' Paraclypei not or scarcely surpassing anteclypeus 7
- 7(6). Scent gland spout reaching more than halfway from inner margin of ostiole to lateral margin of metapleuron *Hyperbius* Stål
 7' Scent gland spout short 8
8. Mesosternum weakly carinate; female with one pair of Pendergrast's organs *Tolono* n. gen.
 8' Mesosternum without carina; female with two pairs of Pendergrast's organs *Praesus* Stål
- 9(1). Mesosternal carina greatly produced, extending anteriorly beyond procoxae; abdominal spine appressed to right side of posterior portion of mesosternal carina 10
 9' Mesosternal carina weakly developed or absent 11
- 10(9). Scent gland spout reaching a little more than halfway from inner margin of ostiole to lateral margin of metapleuron *Elasmucha* Stål
 10' Scent gland spout reaching about three-fourths distance from inner margin of ostiole to lateral margin of metapleuron *Elasmostethus* Fieber
- 11(9). Abdominal spine surpassing mesocoxae 12
 11' Abdominal spine not reaching mesocoxae 13
- 12(11). Scent gland spout reaching more than halfway from inner margin of ostiole to lateral margin of metapleuron; abdominal spine attaining procoxae *Blandus* Stål
 12' Scent gland spout reaching about one-third distance from inner margin of ostiole to lateral margin of metapleuron; abdominal spine attaining head *Bebaeus* Dallas
- 13(11). Paraclypei contiguous before anteclypeus *Sniploa* Signoret
 13' Paraclypei not surpassing anteclypeus or if longer than anteclypeus neither markedly convergent nor contiguous 14
- 14(13). Scent gland spout extending much farther than halfway from inner margin of ostiole to lateral margin of metapleuron 15
 14' Scent gland spout extending halfway or less from inner margin of ostiole to lateral margin of metapleuron 16
- 15(14). Anterolateral pronotal margins serrate; first antennal segment not surpassing apex of head; mesosternum slightly depressed lengthwise *Pseudobebaeus* Distant
 15' Anterolateral pronotal margins entire, somewhat rugose; first antennal segment slightly surpassing apex of head; mesosternum weakly carinate *Phorbanta* Stål
- 16(14). Scent gland spout reaching halfway from inner margin of ostiole to lateral margin of metapleuron *Lanopis* Signoret
 16' Scent gland spout reaching not more than one-third distance from inner margin of ostiole to lateral margin of metapleuron 17
- 17(16). Spine at base of abdominal venter clearly extending onto metasternum 19
 17' Base of abdominal venter tuberculate, tubercle not or scarcely surpassing posterior margin of metasternum 18

- 18(17). Apex of head broad, anteclypeus and each paraclypeus individually rounded, sides scarcely concave before eyes *Ea* Distant
 18' Apex of head a narrow smooth parabola, sides distinctly concave before eyes *Acrophyma* Bergroth
- 19(17). Paraclypei clearly surpassing anteclypeus, dehiscent; mesosternum weakly carinate; first antennal segment slightly surpassing apex of head *Sinopla* Signoret
 19' Anteclypei slightly longer than paraclypei; mesosternum without carina; first antennal segment not reaching apex of head *Hellica* Stål

Mazanoma, n. g.

Type species: *Mazanoma variada*, n. sp.

Head. Antenniferous tubercles unarmed. Basal segment of antennae reaching almost to apex of head. Maxillary tubercle absent. Bucculae moderately elevated, covering about three-fourths of distance from their anterior limit to base of head, extending a little beyond distal end of first rostral segment, arcuately truncate at their posterior limit. Apex of rostrum resting on metasternum.

Thorax and wings. Prosternum somewhat produced on each side of broad median sulcus; rostrum lying in sharply defined sulcus of mesosternum; metasternum concave. Scent gland spout drop-shaped, expanding from ostiole, covering about one-third of distance from ostiole to lateral margin of metapleuron; evaporative area not defined (Fig. 4). Costal margin of coria arcuate with slight expansion above posterior limit of metapleura, radial vein plicately elevated; membranes nearly reaching or slightly surpassing apex of abdomen (Fig. 1).

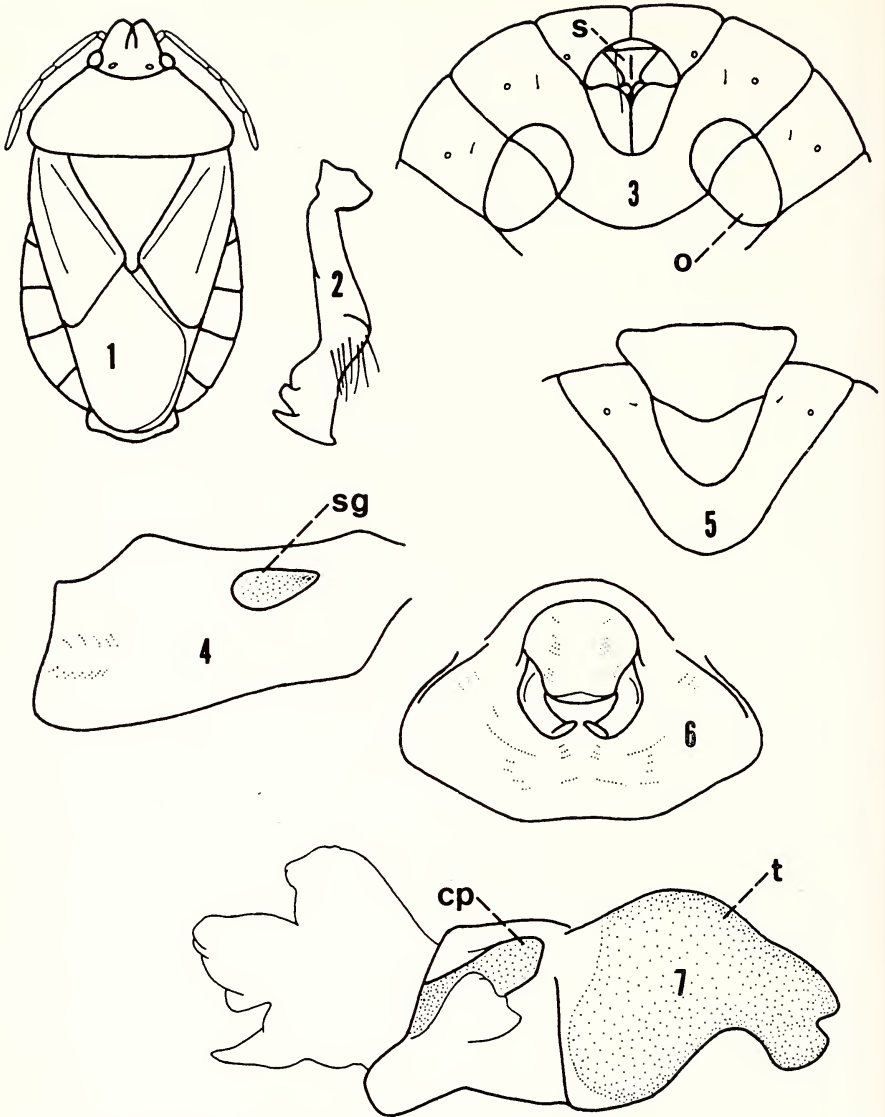
Abdomen and general body features. Body obovate. Abdomen spatulate due to dorsad inclination of connexiva toward margins, broadest at fourth and fifth segments, appreciably wider here than pronotum. Connexiva broadly exposed. Pendergrast's organ covering sixth and basal half of seventh abdominal sterna. Abdomen lacking median spine or tubercle. One discernible trichobothrium caudad and mesad of each spiracle on sterna 3-7.

Male genitalia. Maximum diameter of phallosome near distal limit, no great ventral enlargement basad of conjunctiva (Fig. 7). Conjunctiva with partially sclerotized pair of dorsolateral processes. Seminal conducting canal tubular, not expanded into conducting chamber.

Female genitalia. 8th paratergites truncate apically, continuing contour of connexiva, bearing exposed spiracles; remaining genital plates together forming obovate area in deep emargination of seventh sternum (Fig. 3).

Mazanoma variada, n. sp.

Paraclypei rounded distally, contiguous or dehiscent before anteclypeus, lateral margins slightly sinuous. Elongate depression with black confluent punctures located on each side of disk between eye and anteclypeus and running from ocellus to level of distal end of antenniferous tubercle. Anterior to these depressions paraclypei slope upward from anteclypeus to lateral margins, forming disk on anterior half of head into trough. Punctuation other than in depressions moderately dense with punctures mostly discrete, black or castaneous. Antennae dark brown becoming fuscous on third segment or near base of fourth; second segment slightly bowed; length of segments 0.4-0.5; 1.2-1.3; 0.8; 0.8-1.0 mm.



FIGS. 1-7. *Mazanoma variada* n. sp. FIG. 1. General dorsal aspect. FIG. 2. Right paramere. FIG. 3. Apex of female abdomen, ventral aspect; Pendergrast's organ (o); tenth sternite (s). FIG. 4. Right metapleuron; scent gland spout (sg); FIG. 5. Apex of male abdomen, ventral aspect. FIG. 6. Genital cup. FIG. 7. Aedeagus; conjunctival process (cp); phallosome (t).

Pronotum subtriangular, truncate apically (Fig. 1). Anterior emargination evenly concave behind head; anterolateral margins nearly straight, obtusely carinate, lacking denticle at anterolateral angles; humeri broadly rounded, protruding little beyond costal margin of hemelytra at base. Transverse tumescence on anterior pronotal disk includes

indistinct cicatrices and area between them, separated from anterior pronotal margin by narrow sulcus. Punctuation rather evenly distributed excepting scattered patches of dense black punctures, especially in and near anterior submarginal sulcus, in submarginal impression before each humerus and on humeri. Color predominately ivory, relieved by discrete or aggregated black punctures and caudad of tumescence by light castaneous punctures and blotches. Width at humeri 4.0-4.5, mesal length 1.7-1.9 mm.

Basal two-thirds of scutellar disk tumescent, elevated well above surface of coria, with large central impression. Color ivory excepting large light castaneous to brown basal patches on each side of impunctate median fascia dividing entire scutellum. Punctuation mostly black, usually aggregated along lateral borders and frequently in dark basal patches. Sides converging somewhat arcuately along frena, parallel beyond frena; apex subangulate. Width at base 2.4-2.6, length 2.3-2.6 mm.

Punctations of coria rather fine, brown or rufous or black, black and aggregated in broad irregular ivory band along membrane. Membrane vitreous, venation reticulate. Broadly exposed connexiva immaculate brownish yellow in females, broadly banded with fuscous along both sides of intersegmental sutures in males.

Head and thorax beneath brownish yellow, usually with some irregular rufous or castaneous infusion. Punctuation moderately strong and dense, concolorous to black. Lateral half of mesopleura with conspicuous broad transverse depression. Deep marginal depression on metapleura extending mesad about length of lateral lobe on posterior margin of mesopleura and located almost equidistant from anterior and posterior metapleural margins. Legs stout, predominately brownish to castaneous usually, with a broad pale band of varying width beginning near proximal end of tibiae; superior surface of tibiae flattened. Abdomen brownish yellow with dense concolorous punctuation; maximum width 4.2-5.2 mm.

Length of body 8.7-9.6 mm.

Posterior pygophoral margin sinuously truncate from ventral aspect (Fig. 5), sinuously rounded from dorsal aspect (Fig. 6). Floor of genital cup transversely rugose, with a low broad median elevation. Apical half of parameres arcuate beyond sublinear stem, forming setose cup proximally, bearing subapical truncate tooth and terminating in acute tooth, both teeth along mesal edge (Fig. 2). Distal margin of phallosome unpigmented, unclearly differentiated from conjunctiva, appearing deeply emarginated ventrally. Sclerotized rami of dorsolateral conjunctival processes ascending from W-shaped common base. Gonopore apparently located near dorsolateral conjunctival processes, encircled by multilobate ragged-appearing distal portion of conjunctiva.

Tenth sternum of females depressed mesially, subtriangular; tenth tergum visible, subvertical.

Types. Holotype. Male, labeled Guardia Vieja, Cord. Aconcagua, 12 Dic-1958, Leg. G. Barria. Polyphore dissected; right antennae missing. Deposited in University of Chile, Santiago. (Facultad de Agronomia Museo)

Paratypes. 2 ♂♂, 4 ♀♀. Same data as holotype. Deposited as follows: ♂ Louisiana State Univ.; ♀, U.S. Nat. Museum; ♂, 2 ♀♀ Luis Peña collection; ♀ Univ. Nac. La Plata, Arg. (Museo La Plata)

Tolono, n. g.

Type species: *Tolono decoratus*, n. sp.

Head. Antenniferous tubercle unarmed. Basal segment of antennae nearly reaching to slightly surpassing apex of head. Maxillary tubercle absent. Bucculae moderately elevated, joined posteriorly, covering about three-fourths of distance from their anterior limit to

base of head, extending beyond distal end of first rostral segment, arcuately truncate at their posterior limit. Basal segment of rostrum and bucculae prominent, inclined about 45° from longitudinal axis of head (Fig. 9); apex of rostrum reaching onto metasternum. Eyes not contiguous with pronotum.

Thorax and wings. Prosternum with shallow impression on each side of weak median carina; impressions and carina narrowing toward procoxae; mesosternum and metasternum nearly flat, meson weakly carinate in former, shallowly sulcate in latter. Ostiole auriculate; auricle short, protruding, extending about one-sixth of distance from inner margin of ostiole to lateral margin of metapleuron; evaporative area well defined, matte, on metapleuron covering about half the distance from ostiole to lateral margin of metapleuron (Fig. 10). Costal margin of coria smoothly sigmoid; disk without hump or fold; membrane extending a little beyond apex of abdomen (Fig. 8).

Abdomen and general body features. Body ovoid, broadest across third abdominal segment, slightly wider here than across humeri. Connexiva not exposed. Pendergrast's organ small, one on each side near anterior margin of seventh abdominal sternum. Abdomen lacking median spine or tubercle. Paired trichobothria on each side of abdominal sterna 3-7 paralleling posterior margin of sterna and on posterior margin of narrow shallow transverse impression; outer trichobothrium of each pair on spiracular line (Fig. 13).

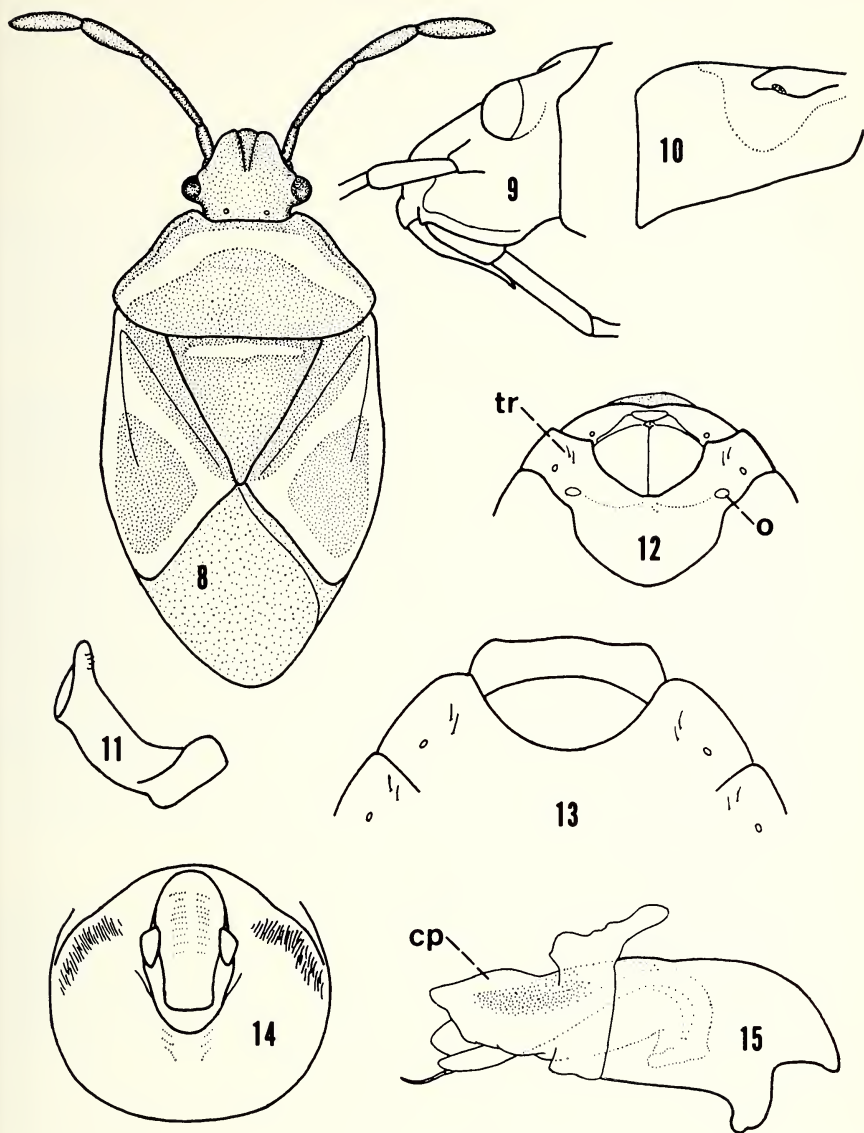
Male genitalia. Conjunctiva incompletely eversible, a dorsal and ventral fold remaining when sides completely extended, bearing dorsomedian membranous lobe and on each side one dorsolateral process, latter with pigmented ramus apparently arising within dorsal conjunctival fold. Seminal vesical except near distal end enclosed by median penal lobes, these curving abruptly ventrad at termination within phallosheca; portion of seminal vesical within phallosheca obscured.

Female genitalia. First gonocoxae large, convex, together forming approximately half of hemisphere; 8th paratergites cultriform, each bearing a spiracle; remaining genital plates little exposed (Fig. 12).

Tolono decoratus, n. sp.

Black, shiny, marked with shades of yellow. Dorsum broadly marked with ivory as follows: on pronotum a crescent curving from postero-lateral margins to anterior submargin; on scutellum a transverse basal band; on each corium a band along costal margin and along membrane, this marginal band connected by a diagonal band running from near base of costa to inner angle of corium. Ventrally, edge of coria ivory; broad subbasal band on tibiae, sometimes obscurely displayed on posterior tibiae only, and usually basal band on second rostral segment ivory or sordid yellow; broad band along lateral margins of abdomen and rectangular area on disk of abdominal sterna 4-6 pale orange, this area a little longer than wide, usually enclosing dark semicircular spot or band at base of one or more segments.

Anteclypeus longer than paraclypei, cuneiform, broadly rounded at apex. Lateral margins of paraclypei sigmoid, before eyes reflexed and concave, largely exposing antenniferous tubercles from above; distal portion of paraclypei sloping upward from anteclypeus to outer margins. Disk rugosely punctate excepting rather smooth basal area which includes ocelli and extends on each side to eye. Antennal segments 0.6-0.7; 0.6-0.7; 0.6-0.7; 0.9-1.1; 1.1-1.4 mm in length. Width of head across eyes 1.9-2.2; length 1.7-2.0 mm.



FIGS. 8-15. *Tolono decoratus* n. sp. FIG. 8. General dorsal aspect. FIG. 9. Head, lateral aspect. FIG. 10. Right metapleuron. FIG. 11. Right paramere. FIG. 12. Apex of female abdomen, ventral aspect; Pendergrast's organ (o); trichobothria (tr). FIG. 13. Apex of male abdomen, ventral aspect. FIG. 14. Genital cup. FIG. 15. Aedeagus; conjunctival process (cp).

Pronotum subtriangular, apically truncate and moderately emarginate; anterolateral margins slightly sinuous, narrowly reflexed, lacking denticle at anterolateral angles; humeri narrowly rounded, scarcely produced (Fig. 8). Shallow arcuate impression traversing disk about midway between anterior and posterior margins, paralleling basal margin of pronotum; no indication of cicatrices; punctation fine, sparse, excepting a line of strong close punctures along anterior margin which continues with diminishing strength along anterolateral margins and a similar line in impression of disk between arc of ivory band. Width at humeri 3.6–4.3, length at meson 1.5–1.9 mm.

Lateral margins of scutellum faintly convex along frena, curving sigmoidly from distal end of frena to subacute apex; disk convex basally; punctation fine, sparse. Width at base 2.1–2.5, length 2.0–2.4 mm. Hemelytra covering connexiva; costal margin of coria noticeably reflexed along basal half; punctation moderately strong and rather dense along clavical suture, elsewhere on coria fine, sparse; membrane dark, translucent, veins few, simple, inconspicuous.

Ventral surfaces of head and thorax with moderately strong sparse punctation; abdomen without obvious punctation. Legs of moderate size; superior surface of tibiae flattened toward apex; posterior tibiae bowed dorsoventrally. Seventh abdominal sternum of female slightly protruding mesally on posterior margin, a constriction extending laterad on each side from this point to Pendergrast's organ.

Length of body with membrane 7.4–9.2 mm.

Posterior margin of pygophore sinuately truncate from ventral aspect (Fig. 13), rounded from dorsal aspect (Fig. 14); dense patch of setae located along anterolateral borders within genital cup. Parameres small, subcylindrical, with rather flat production at apex extending cephalad and bearing a few transverse ridges opposite apical face (Fig. 11). Phallosome weakly sclerotized and little pigmented, indistinctly differentiated from conjunctiva. Seminal vesical terminating distally as hyaline flagellate penisfilum (Fig. 15).

In female, 9th paratergites narrowly exposed along posterior border of basal plates. Second gonocoxae projecting obscurely as carinate triangle. Tenth sternite small, subrectangular, transverse (Fig. 12).

Types. *Holotype.* Male, labeled E. Loja, Ecuador, 2800 m, 21-Nov. 1970, Coll. L. E. Peña. Pygophore dissected. Deposited in Univ. Chile, Santiago.

Paratypes. 26 ♂♂ and 36 ♀♀. Same data as holotype, 2 ♀♀ deposited in Univ. of Chile, ♀ in Luis Peña coll.; Colombia, Nariño, Laguna La Cocha, IX-26-71, G. E. Bohart, 2 ♂♂, 7 ♀♀ Utah State Univ., ♂, ♀ Univ. Nac. La Plata, ♂, ♀ Univ. Fed. Rio Grande do Sul, ♀ Naturhistoriska Riksmuseum, Stockholm, ♀ Univ. Zool. Mus. Copenhagen; Colombia, Nariño, Lago de La Cocha, 2600 m, Dec. 1–3, 1970, B. Malkin, 17 ♂♂, 20 ♀♀ Amer. Mus. Nat. Hist., 2 ♂♂, ♀ La. State Univ., ♂, ♀ Brit. Mus. (Nat. Hist.); (a) La Sierra, Jan. 29, 1931, W. A. Archer (b) Colombia, S. A., W. A. Archer, 2 ♂♂ U.S. Nat. Mus.

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